effectiveness of screening the general population for elevated albuminuria. The aim of this study was to estimate the cost-effectiveness of various 'screen-and-treat' scenarios. **METHODS:** A multi-state Markov model was developed to simulate 'natural course' albuminuria-based progression to dialysis and occurrence of CV-events. Transition probabilities were derived from data of the PREVEND study, an observational, general population-based cohort study. In the base-case analysis, cost-effectiveness was estimated for screening the general population on microalbuminuria (pre-screening on first morning void urinary albumin concentration ≥20 mg/L and confirmation in two 24-hr urine samples with urinary albumin excretion ≥30 mg). Cost of screening and ACE-inhibitor treatment minus savings on dialysis and CV-events was divided by life-years gained (LYG) over a 8-years time-horizon, to render the cost-effectiveness ratio for the base-case microalbuminuria screening and alternative scenarios. Costs (2008 values) and effects were discounted at 4% and 1.5%, respectively. **RESULTS:** Among 1000 subjects identified with microalbuminuria, 76 versus 124 CV-events, 16 versus 27 CV-deaths and 3 versus 5 dialysis cases were found for simulating screening and treatment versus no screening, respectively. The per-person cost of screening was calculated at €926 (€2,003 versus €1,077) and prevention of CV-deaths was estimated to gain 0.0421 per-person discounted life years, resulting in a cost-effectiveness of €22,000 per LYG. The probability of accepting screening for microalbuminuria with maximum willingness-to-pay thresholds of €20,000, €50,000, and €80,000 per LYG, was estimated at 54%, 90% and 95%, respectively. Limiting screening to subjects aged >50 or >60 even improved cost-effectiveness. Incremental analyses suggest a most optimal cost-effectiveness of screening for microalbuminuria. **CONCLUSIONS:** Our current analyses suggest most favorable cost-effectiveness of screening for microalbuminuria if compared with other evaluated alternative albuminuria-based scenarios.

PCV103

COST-EFFECTIVENESS OF EXTENDED VERSUS NON-EXTENDED PROPHYLAXIS WITH ENOXAPARIN IN HIGH-RISK SURGICAL PATIENTS IN AUSTRALIA

Tilden D[1], Lee JM[2]

[1]THEMA Consulting Pty Ltd, Sydney, Australia, [2]Sanofi-Aventis Australia Pty Ltd, Macquarie Park, NSW, Australia

OBJECTIVES: Extended prophylaxis with a low molecular weight heparin (LMWH) such as enoxaparin in high risk surgical patients is consistent with the recommendations made by the American College of Chest Physicians 8th Conference on Antithrombotic and Thrombolytic Therapy. The objective of this study was to compare the costs and effectiveness of extended versus non-extended prophylaxis from the perspective of Australian public hospitals. **METHODS:** A decision-analytic model was constructed using local treatment algorithms and populated with clinical trial data. A hypothetical cohort of 1000 high-risk general surgery patients received enoxaparin 40 mg daily for 7 days (non-extended prophylaxis) or enoxaparin 40 mg daily for 28 days (extended prophylaxis) in an Australian public hospital. Efficacy data were drawn from the ENOXACAN II trial (Bergqvist et al, 2002). The modelled simulation estimated the incidence of VTE (symptomatic deep vein thrombosis [DVT] and pulmonary embolism [PE]) and adverse events (heparin-induced thrombocytopenia [HIT], post-thrombotic syndrome [PTS], prophylaxis and treatment-related bleeding, mortality) within 28 days and one year of initiating prophylaxis. **RESULTS: By extending prophylaxis with** enoxaparin from 7 days to 28 days in 1000 patients, the model estimated 20 fewer symptomatic DVTs, 4 fewer symptomatic PEs, 3 fewer deaths, 10 fewer episodes of PTS and 140 fewer hospital days. Extending prophylaxis was associated with cost savings of $126,242 from the perspective of an Australian public hospital. **CONCLUSIONS: Extended prophylaxis with enoxaparin 40 mg represents a cost-effective** treatment option for high-risk general surgery patients in Australia.

PCV104

THE COST-EFFECTIVENESS ANALYSIS IN SCREENING OF DEEP VEIN THROMBOSIS IN A CLINICAL LABORATORY

Bogavac-Stanojevic N[1], Dopsaj V[1], Vasic D[2], Jelic-Ivanovic Z[1]

[1]University in Belgrade, Belgrade, Serbia, Serbia and Montenegro, [2]Clinical Centre of Serbia, Belgrade, Serbia, Serbia and Montenegro

OBJECTIVES: Deep vein thrombosis (DVT) is associated with a high degree of morbidity and requires rapid diagnosis and effective anticoagulant treatment. An accurate diagnosis of DVT requires clinical assessment e.g. calculation of **pretest-probability** score **(PTP) and objective testing, because the clinical features are non-specific** and commonly used imaging techniques can be inconclusive. The use of D-dimer assays improves diagnostic accuracy. The aim of this study was to examine the cost-effectiveness of three different D-dimer assays in the diagnosis of DVT, alone or in combination with PTP. **METHODS:** We construct two decision-analytic models (DAM) involving 96 outpatients with clinically suspected acute DVT. First DAM involve 96 outpatients and estimate the number needed to screen to find one true positive patients (NNSTPP) selected for compression ultrasound (CUS) and costs of three strategies: DVT screening with D-dimer Plus assay; DVT screening with D-dimer Hemosil assay and DVT screening with Vidas D-dimer Exclusion assay. Second DAM involves 79 patients selected from the 96 patients according to PTP scoring and estimate NNSTPP and costs of three strategies as for previous model. The cost of strategies was calculated on the basis of the consumed resources for diagnostic tests, laboratory time and consumables. **RESULTS:** The perspective of incremental cost-effectiveness analysis is the clinical laboratory setting. A diagnostic strategy employing DVT screening with Vidas D-dimer Exclusion assay had lowest cost per additionally successfully diagnosed patient than the strategy employing DVT screening with D-dimer Hemosil assay in the first DAM (€1.13 vs. 19.15) and second DAM (€8.7 vs. 20.9). **CONCLUSIONS:** In the clinical laboratory setting is sufficient to determine D-dimer concentration with Vidas D-dimer Exclusion assay for DVT screening. A diagnostic strategy using PTP assessment and Vidas D-dimer Exclusion assay effectively diagnoses DVT, but expands costs per additionally successfully diagnosed patient.

PCV105

COST-EFFECTIVENESS OF GENEOTYPE-GUIDED DOSING OF SHORT-TERM USE OF WARFARIN AMONG DVT/PE PATIENTS

Teschemaker AR[1], Lawrence W[2]

[1]Howard University, Washington, DC, USA, [2]Agency for Healthcare Research and Quality, Rockville, MD, USA

OBJECTIVES: To conduct a cost-effectiveness analysis (societal perspective) comparing standard anticoagulation care to genetic testing of cytochrome P450 (CYP2C9) and vitamin K epoxide reductase complex subunit 1 (VKORC1) to guide short-term warfarin therapy among patients with venous thromboembolism (VTE). **METHODS:** A decision model evaluated use of genotype testing to guide initial dosing during 6-months of warfarin therapy among VTE patients. The clinical and economic outcomes were associated with four alternatives: 1) CYP2C9 and VKORC1 genotype; 2) CYP2C9 genotype; 3) VKORC1 genotype; and 4) no testing. All clinical probabilities were derived from current scientific literature. Direct-medical and -nonmedical costs, and indirect costs were estimated from published databases and literature. Effectiveness was measured in quality-adjusted life-years (QALYs) at a discounted rate of 3%. All costs were in 2007 U.S. dollars. **RESULTS:** In the base case analysis, the genotype-guided dosing strategies demonstrated better health outcomes. Assuming a baseline prevalence of CYP2C9 associated warfarin sensitivity of 36% and of VKORC1 sensitivity of 63%, the marginal cost-effectiveness of the combination of CYP2C9 and VKORC1 genotype-guided dosing exceeded $100,000/QALY compared with VKORC1 testing alone. However, compared with no testing, the cost-effectiveness of testing decreased to <$0,000/QALY. At a threshold of $100,000/QALY the probability for CYP2C9 and VKORC1 genotype-guided dosing to likely be cost-effective was <70%.Overall, the cost-effectiveness analysis demonstrated VKORC1 genotype-guided dosing to be the optimal strategy (probability = 0.64). Sensitivity analysis showed that for CYP2C9 and VKORC1 genotype-guided dosing to cost less than $100,000/QALY it would have to cost less than $440/test or be restricted to patients with high risk of bleed given an INR increase (RR = 3.9–5.8). **CONCLUSIONS:** In the general population, VKORC1 is cost-effective. However, restricting the testing to patients at high risk of bleed, a combination of both genotype-guided dosing is most likely to be cost-effective compared with the standard care.

PCV106

PREDICTED COST-EFFECTIVENESS OF ACHIEVING MULTIPLE OPTIMAL LIPID VALUES WHEN FENOFIBRIC ACID IS CO-ADMINISTERED WITH A STATIN IN SPECIAL PATIENT POPULATIONS WITH MIXED DYSLIPIDEMIA

Webb SF[1], Sorensen SV[2], Williamson R[3]

[1]Abbott Laboratories, Abbott Park, IL, USA, [2]United BioSource Corporation, Bethesda, MD, USA, [3]UnitedBiosource Corporation, Bethesda, MD, USA

OBJECTIVES: To evaluate the short-term cost-effectiveness of achieving multiple optimal lipid values (MOLV) for fenofibric acid (FFA) co-administered with low-cost generic simvastatin (20 mg and 40 mg) compared to co-administration with branded rosuvastatin (10 mg and 20 mg) or atorvastatin (20 mg and 40 mg) in post-menopausal female, elderly (age ≥ **65 years), metabolic syndrome, and diabetic patient** subgroups with mixed dyslipidemia. **METHODS:** A disease outcomes model was used to estimate MOLV attainment (achieving any 3 of 4 targets: total-C < 200 mg/dL, LDL-C < 130 mg/dL, HDL-C > 40 mg/dL or >50 mg/dL pending subgroup, TG < 150 mg/dL) and associated annual drug costs for patients receiving FFA and a statin. Subgroup-specific baseline lipid values, lipid efficacy, and adherence rates were obtained from pooled analyses of three 12-week, double-blind, randomized controlled trials of FFA co-administered with a statin. FFA and statin costs were based on wholesale acquisition costs net of patient copayments. **RESULTS:** The predicted proportion of patients achieving MOLV for FFA co-administered with moderate-dose simvastatin, rosuvastatin, and atorvastatin ranged from 39%–68%, 56%–90%, and 50%–80%, respectively, across the four patient subgroups. Corresponding per patient drug costs ranged from $859–$886, $1730–$1822, and $1718–1896, respectively, and per patient costs to achieve MOLV ranged from $1281–$2266, $1926–$3195, and $2299–$3415, respectively. The incremental cost effectiveness ratio (ICER) for one additional patient achieving MOLV for FFA co-administered with moderate-dose rosuvastatin or atorvastatin versus generic simvastatin was $6,376 and $20,552 in post-menopausal female; $3,937 and $7,926 in elderly; $5,272 and $8,869 in metabolic syndrome; and $5,412 and $7,426 in diabetic patient subgroups, respectively. For low-dose statin combinations, qualitative results were similar though ICERs were higher in the elderly and diabetic patient subgroups. **CONCLUSIONS:** Co-administration of FFA with low-cost generic simvastatin results in slightly fewer patients achieving MOLV but has the lowest annualized cost per MOLV achieved compared to equivalent dose combinations with rosuvastatin or atorvastatin in special populations.